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The Economics of Defense Spending

COMMANDERS DIGEST

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The Defense Budget and The Federal Fiscal Picture

ROBERT C. MOOT

My office has recently completed a report entitled, "The Economics of Defense Spending—A Look at the Realities." As the title implies, the size and impact of the DoD budget are clouded by a lack of understanding. There seems to be as many myths about the budget as there are realities. If there is to be any rational dialogue, the facts surrounding the budget must be candidly approached.

Yet, some critical voices are raised, reciting myths that seem credible until examined. Just to name a few: "The Defense Budget dominates public spending," "The Nation is on a wartime economy," "DoD squanders millions on cost overruns," "The peace dividend has been stolen."

The facts are to the contrary, but they don't seem to make headlines. Where have you read that the Defense share of the Gross National Product or the total National Budget is at the lowest point in more than twenty years? Where have you read that the Defense budget no longer dominates the Federal fiscal picture?

I readily recognize that fiscal policies and procedures are complicated and do not lend themselves to easy understanding. At the same time, the DoD budget must be understood by military professionals. This is why I have authorized COMMANDERS DIGEST to publish this condensation of "The Economics of Defense Spending—A Look at the Realities."

I trust that comptrollers and other fiscal officials will refer to the longer and more definitive document. Equally I trust that military professionals, not ordinarily concerned with fiscal policy and the budgetary process, will acquaint themselves with the basic budget issues as discussed in this condensed version.

It is for the lay reader that I have authorized this special issue of COMMANDERS DIGEST. I consider it important professional reading.

R. C. Moot

Assistant Secretary of Defense (Comptroller)

A Look At The Realities

INTRODUCTION

National Defense spending for Fiscal Year (FY) 1973, in dollars of constant buying power, will be at the lowest level since FY 1951. Manpower (military, civil service and industry) will be at the lowest levels since 1950. So will general purpose forces—Army and Marine divisions, naval vessels, and aircraft units, for example. This means that, comparing FY 1973 with any year in the past 22, one would find that none of the real growth in our economy—gross national product (GNP) or labor force—has been allocated to defense.

From FY 1968 (the wartime peak) to FY 1973, defense manpower (military, civil service and defense-related jobs in industry) falls by about 2.8 million, or 35 percent. Purchase of goods and services from industry falls by 40 percent. National Defense spending in real terms has fallen sharply in each of the past five years, and has been reduced by about one-third from FY 1968 to FY 1973.

Defense in FY 1973 will account for about 20 percent of all public spending. Federal, state and local, and defense manpower (military and civil service) will be about 21 percent of all public employment—the lowest shares since well before Pearl Harbor. The defense shares of GNP, the U.S. labor force and of the Federal budget are the lowest since FY 1950.

It is clear, moreover, that the defense budget—war buildup and all—did not dominate public spending or the economy in the 1960s, and it is even less of a factor today.

In spite of all this, it continues to be commonplace to assess public spending and related economic developments within the analytical framework of a war economy. "Conversion" to a peacetime economy continues to be mentioned in the future tense, as if nothing had changed. The massive manpower and purchase cutbacks since 1968 have gone widely unnoticed. Defense spending is still offered as the explanation for all manner of economic and related ills, including inflation, balance-of-payments difficulties, the decay of the cities, and the spending crunch. Not only have the cutbacks since 1968 escaped notice, but the defense budget is addressed as if it were constantly rising.

Some perspective regarding defense spending—trends, composition, and impact upon the taxpayer and the economy—is badly needed. It is necessary to begin with a clear understanding of the makeup of the defense budget itself, which we address on Page 7. Defense spending has remained high largely because of military and civil service pay increases in accordance with law. Measuring from President Eisenhower's last budget (FY 1961) to FY 1973, pay costs have risen by $24 billion, while manpower has declined. Operating costs, in large part related to personnel (medical, training, education and housing, for example), have increased by $5.2 billion. The remainder of the budget (investment) has increased by just over $2 billion. This area of the budget—which includes all funds for the development and procurement of aircraft, missiles, ships, electronics systems, and other equipment and facilities as well—has grown about 11 percent since the last Eisenhower years. In real terms, allowing for general inflation, there has been a sharp decline. And yet, most public discussion of defense programs centers upon this area, with the clear implication that additional tens of billions have been poured in.

We no longer have a war economy, and we haven't had one since the 1950s. We address these matters on page 18. We begin by comparing defense and other economic sectors over two cycles of war finance—the Korean cycle, 1950-53-56, and the Southeast Asia cycle, 1964-68-72. It is clear that defense played a dominant role in the former cycle, and just as clear that other sectors dominated the latter. Similarly, while many continue to trace our inflationary problems to defense budget trends in the 1966-68 period, we believe that a careful reading of the record invalidates this contention. One can conclude that war spending was the primary cause of inflation only if one is willing to assume that non-defense public spending does not involve real money, and that non-defense public employment does not involve real manpower.

As to manpower, how can an economy that has created 16 million non-defense jobs since 1961, with defense manpower dropping, be characterized as a war economy? How can charges that the war machine is being used to make jobs coexist with such a development, or with the fact that defense manpower falls by 2.8 million (35 percent) from FY 1968 to FY 1973?

We had a war economy in 1945. Public employment—including military personnel and civilian employment of all units of government, Federal, state and local—stood at 19 million, an all-time high. Defense accounted for 78 percent of that total. In FY 1973, public employment will be 16.2 million, with domestic (non-defense) employment accounting for 79 percent of it. Social and economic spending, as we use the term, includes all public spending except for National

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Defense, space, veterans, international programs, and Federal debt interest. In constant Calendar Year (CY) 1958 prices:

- National Defense spending was $152.7 billion in FY 1945, while social and economic spending was $34.4 billion; and
- Social and economic spending will be $144.7 billion in FY 1973, with National Defense at $43.7 billion.

Clearly, the term "war economy" must be used rather loosely to be applicable to FY 1973—to characterize FY 1945 as a "peace economy" would be roughly as accurate.

In 1972, the private sector of the U.S. economy will produce about $990 billion in goods and services. Defense will take about four percent of that. Setting aside the aircraft and ordnance industries, the defense share is 2.7 percent. For the vast bulk of U.S. industry, then, defense accounts for about 2.7 percent of the business. Is the line between a "war economy" and a "peace economy" really somewhere between zero and 2.7 percent?

Defense has been blamed for everything from power shortages to poor passenger train service to the balance-of-payments problem because it has allegedly hoarded research and development (R&D) talent, plundered the infrastructure, corrupted American industry through lax contracting methods, and dried up sources of capital for civilian-oriented enterprise. The facts don't sustain these charges. According to the National Science Foundation, defense-related R&D is smaller in 1972 (in real terms) than it was in 1958, or any year since. Meanwhile, U.S. R&D capacity has grown enormously, and the defense share has been cut nearly in half. Power shortages and brownouts? U.S. electrical generation capacity and consumption have grown immensely. Trains? Americans love cars, and in fact automotive horsepower exceeds that devoted to trains by a factor of 358 to 1. We have the horses to have any kind of transportation system we want; it's illogical to blame defense programs for the fact that Americans devote all this horsepower to automobiles. The U.S. aircraft industry, which is 20 times more dependent on defense work than U.S. industry generally, has the best balance-of-trade record in the entire U.S. economy, even better than agriculture. Not only that, but productivity growth in the aircraft industry is nearly twice as great as for manufacturing industry generally over the last five years for which data are available.

". . . It is clear, moreover, that the defense budget—war buildup and all—did not dominate public spending or the economy in the 1960s, and it is even less of a factor today. . . ."

Is defense the driving force behind our balance-of-payments problems? In the late 1950s and early 1960s, defense spending entering the balance of payments was equivalent to nearly one-fourth of U.S. merchandise imports. Today the figure is less than 10 percent. Overseas manpower in FY 1972, in spite of Vietnam, is 18 percent less than the FY 1956-59 average. From FY 1968 to FY 1972, defense-related manpower world-wide (including industry) was cut by 35 percent; overseas manpower was cut nearly in half; purchases from industry (in real terms) were reduced by 34 percent, with a 25 percent cut in defense spending abroad. If defense programs were a dominant factor in the U.S. balance-of-payments situation, then the over-all position would have improved dramatically from FY 1968 to FY 1972. It didn't. In fact, the U.S. balance moved massively in the opposite direction, much more so than in FY 1964-68 when the defense trend was adverse.

As to prices, the highest inflation in the U.S. economy by far (76.4 percent from 1964 to 1971) has been in construction, where defense accounts for less than one percent of the business. A total of five sectors have had above-average inflation, and defense accounts for less than one percent of the business in four of them (2.7 percent in the fifth). The largest defense impact is in the sectors with below-average inflation. It is true that military and civil service pay raises, plus inflation on purchases from industry, have had a heavy impact upon the defense budget. But, according to figures maintained by the Department of Commerce, the impact of inflation has been even greater for other Federal agencies and much greater for state and local government (whose spending, collectively, is more than double that for defense, with one-fourth of it financed by the Federal Government).

Defense is often blamed for causing inflation because of budget developments during the mid-1960s. The facts are these:

- From FY 1964 to FY 1968, the war buildup period:
  —Defense spending grew by $27 billion, other Federal spending by $35 billion, and state and local spending by $33 billion; and
  —Military and defense civil service manpower rose by 1.1 million; other public employment by 2.1 billion.
- As to the accuracy of budget estimates and resultant inflation-producing deficits during this period, there were underestimates of both defense spending and other spending. Underestimates of defense spending are far from being the sole cause of our budgetary troubles during this 1964-68 period.
- The rate of inflation was much greater after 1968, when massive manpower and purchase cutbacks began in defense, than it was before.
- The greatest defense impact occurred in FY 1967-69, a period of intense inflationary pressure when National Income Accounts (NIA) defense purchases averaged 8.9 percent of GNP. However, NIA defense purchases had averaged 9.3 percent of GNP from FY 1956-64, a period of very stable prices. Indeed, by the time inflation reached its peak and controls were imposed (August 1971) NIA defense purchases were running at 6.7 percent of GNP.

In short, those who would ascribe our economic problems to defense spending must be willing to overlook a great deal of contrary evidence.

U.S. public spending (Federal, state and local) will be $385 billion in FY 1973. These amounts will have to be financed by taxes, or by borrowing in lieu of taxes. There are no separate "cookie jars," no balances in public treasuries to cover these costs. Moreover, about one-fourth of state and local spending is financed through the Federal budget, and the proportion is growing. We face, therefore, a national problem in public finance, and of this $385 billion that must be paid by the American taxpayer, about 20 percent goes to defense—the lowest share since before Pearl Harbor.

Many of the critics of defense programs seem to have a fixation with the economics and the budgetary allocations of the early Cold War period. Their arguments seem to be rooted in the budget for 1953. Things have changed a good deal:

- In FY 1953, defense spending was nearly double that of all other Federal agencies combined. Today, that relationship is more than reversed—other Federal agencies spend more than twice as much as defense.
- In FY 1953, defense spending was nearly double that of all state and local governments combined. This relationship, too, is more than reversed—in FY 1973, state and local spending will be more than double that for defense.
- In FY 1953, defense manpower—military and civil service—was nearly equal to all other public employment, Federal, state and local, combined. In FY 1973, other public employment will exceed defense manpower by a factor of nearly four to one.
- In FY 1953, about 49 cents of every tax dollar—Federal, state and local —went for defense. The 1973 figure is about 20 cents—much closer to the 1939 level (6 cents) than to the 1953 level.

While many have kept their gaze riveted on defense, a great deal has been happening in the area of social and economic spending. This includes all public spending, Federal-state-local, except for defense, international, space, veterans programs, and debt interest. The figures are net of grants-in-aid. Here are the *increases* for social and economic spending:

FY 1953-58:	$ 23.1 billion,	58.6%
FY 1958-63:	$ 33.2 billion,	53.1%
FY 1963-68:	$ 61.4 billion,	64.2%
FY 1968-73 (est.)	$118.5 billion,	75.4%

This brings the FY 1973 total to $275.6 billion, nearly four times the defense budget. If 1973-78 growth is 53.1 percent (the lowest shown above) it will amount to $146.3 billion—twice the defense budget. At the highest rate, the growth would be $208 billion—an *increase* equivalent to nearly three entire defense budgets. There was no Pearl Harbor or Tonkin Gulf to signal this surge in social and economic spending. It just kept growing, quietly and largely invisibly.

Non-defense public employment grows by 7.3 million from FY 1953 to FY 1973, including an increase of 4.5 million in the last 10 years. The latter *increase* alone is greater, by a considerable amount, than the *total* military and civil service manpower of the Department of Defense (3.4 million).

Social and economic spending has grown much faster over the past 20 years than either GNP or revenues, and non-defense public employment has been growing three times as fast as the labor force. This surge has been accommodated largely by a number of expedients and one-time developments that cannot be of much help in the future. The magnitudes involved make it obvious that defense programs cannot be the central element in our resource allocation problems for the future.

The figures just presented suggest that social and economic spending may well be in the $420 to $480 billion range by 1978. In the context of figures such as these, it is clear that cutbacks in the defense budget of, say, $20 billion are not the key to the quality of American life. It is rather difficult to maintain that we could achieve wonders with, say, $500 billion to spend on social and economic programs—wonders which would somehow escape us if we had "only" $480 billion to spend. We shouldn't delude ourselves into believing that the size of the defense budget is the central element of our resource-allocation problems. The major issue is how well we manage and allocate the huge amounts available for social and economic programs. And these resources are indeed immense: $275.6 billion in FY 1973 spending, growing toward $420-$480 billion by FY 1978, plus extra-budgetary credit (estimated at $225 billion in outstanding loans in FY 1973) and Federal tax aids (about $50 billion in FY 1973). If these resources are well managed and well allocated, a great deal can be accomplished. If not, then extra amounts derived by further defense cutbacks are not likely to be of much help.

Defense clearly does not dominate the economy or the public spending picture. Why, then, does defense loom so large in discussions of the economy and public finance? There are many reasons. Certainly budgetary mechanics have played a role in keeping defense in the forefront. Defense is financed exclusively at the Federal level, and largely through a single and widely-publicized appropria-

tion bill. It is easy to lose track of social and economic spending, which is financed at the Federal, state, and local levels, with scattered appropriations and often with automatic financing, not requiring annual appropriations at all. The mixtures of direct spending, purchases, lending, grants, and transfers are complicated and easy to overlook in the budget, in the national income accounts, and in econometric models as well. All of this does come together in the taxpayer's pocketbook, of course, but in no other place. The taxpayer knows that taxes are high, and it is easy to associate these high taxes with the one area of public spending that is clearly revealed. The Federal appropriation process covers essentially all National Defense spending, but only about one-fourth of social and economic spending.

Economists do much of the thinking and writing on public finance, and they frequently use data from the national income and product accounts (NIA) in lieu of budgetary materials. The NIA purchase data reflect about 95 percent of defense spending, but only about 17 percent of non-defense Federal spending. Defense *purchases* are more than double non-defense Federal purchases, but non-defense Federal *spending* is more than double National Defense spending. It is not surprising that those using NIA data grow accustomed to viewing defense as the biggest part of the picture. What is worse, some economists don't know the difference between the purchase and spending data, or fail to appreciate the size of the difference (non-defense Federal spending is $176 billion for FY 1973; purchases are $30.4 billion).

The tools that economists use were, of course, fashioned by the economists themselves, and it's important to recall that most economists active today studied and gained their professional experience when defense spending was indeed a major if not a dominant factor. The Defense budget was about $1 billion annually during the 1930s. An economist whose professional experience encompassed that decade would be about 70 today. The economists have seen a public spending picture, then, that has been dominated by defense. Economic thinking has been conditioned by this fact, and this has been carried into the national income and product accounts and into econometric models.

If one got his information about public spending from the Federal appropriation process or from NIA purchases in, say, 1943 or 1953, he would have less than a complete picture, but he wouldn't be glaringly in error. But for FY 1973, these measures are completely inadequate as a guide to public spending and taxing.

Over the past eight years, the war in Southeast Asia and the progressive disenchantment with it have kept the matter of military spending at center stage. So have a series of other newsworthy developments, including the Berlin crisis, the Cuban missile crisis, the Dominican intervention, and the Strategic Arms Limitation Talks (SALT).

Also clouding the issue has been the fact that defense spending has remained high, in current dollars (that is, dollars as actually spent and reported, not adjusted for inflation). This, in turn, stems from the huge military and civil service pay raises of recent years.

Coupled with the prominence that has been accorded defense spending, there has been a disillusionment—and that's probably far too mild a term. Whatever term one chooses, there is certainly a widespread readiness to believe the worst. As to causes, the war in Vietnam would clearly have to lead the list, but there are many others as well. Defense spending has been high for a very long time, and it is inevitable that people would weary of it. This is especially true for the young, who did not live through the period from World War II to the early 1950s, when the events occurred which led to the largest peacetime military establishment in American history.

A great deal of the thinking and writing on public affairs derives from institutions of higher learning. In most times and in most areas of public affairs, the academic community imposes rigorous standards of scholarship, objectivity, and general competence. Scholarly journals would be unlikely to accept a lengthy article advocating a complete overhaul of, say, U.S. agriculture programs written by a person whose sole acquaintance with the subject derived from a one-year tour with the Department of Agriculture five to ten years ago. Books or articles that are riddled with inconsistencies, unsupported generalizations, and clear departures from reality rarely reach the printer. Even when they do, the half-baked ideas are promptly exposed. These standards are not applied in today's writing on defense matters.

All of these elements have combined to produce views of defense spending that are increasingly at variance with reality. Defense programs are assigned a significance in economic affairs which simply can't be squared with the facts. At the extreme are the hard-core military fundamentalists, who speak of a war economy, a constantly rising defense budget dominated by complex and ever-more-costly weaponry that never works but yields huge profits, and a society beset with ills that cannot be cured until the grip of militarism is broken. If you were old enough to order steak in a restaurant in 1943, you remember the question: "Don't you know there's a war on?" Not many of the military fundamentalists are that old, but they certainly remember the question. The agricultural fundamentalists in an earlier stage of economic history were among the last to notice that there weren't that many folks left on the farm, and the military fundamentalists show every bit as much tenacity.

Military fundamentalism is not restricted to a hard core, however. To an extent, it is implicit in much of what is written about public finance in general and defense programs in particular. For example, consider the efforts to prove that defense spending in the middle 1960s somehow caused the present inflation. These efforts are by no means the exclusive work of hard-core fundamentalists. It is a formidable task.

As we have noted, defense amounted to 9.3 percent of GNP in the FY 1956-64 period, a period of very stable prices. In a period of intense inflationary pressure, FY 1967-69, defense took 8.9 percent of the GNP. Indeed, when price controls were imposed (August 1971), defense was taking 6.7 percent of GNP. It's not easy to move from data such as these to the conclusion that defense spending causes inflation. From FY 1950 to FY 1953, National Defense spending rose by $2.6 billion. That makes it easy to prove that defense spending causes inflation. From FY 1964 to FY 1968, National Defense spending rose $26.9 billion and all other public spending rose by $68.1 billion. The proof becomes a good deal more difficult.

Normally, conspicuous loose ends of this type would be noted and questioned, at least in the scholarly literature. But, as we have noted, today's writing on de-

fense spending doesn't have to meet very high standards.

The doctrines we have been discussing are simply a holdover of cold-war economics, as irrevelant to the real-world economic problems of today as the strategic assessments of 1950 are to current-day force planning. But these doctrines are widely held, and, in whole or in part, they are implicit in much of what is written about defense programs. And, as we have said, they are reinforced by the newspapers, budgetary mechanics, the analytical structure of economics, and the current aversion to military programs.

This loss of perspective can have serious results. The economics community missed the wartime buildup. They also missed (and many apparently haven't noticed to this day) the greater increase in social and economic spending occurring at the same time, and they missed the clear early (1969) signs of the defense cutback that was to involve a 40 percent reduction in purchases from industry and a 30 percent manpower (military and civil service) cut. Indeed, it is still not generally understood that the cutback, in fact, occured. Cuts proposed in some quarters would involve about 1.5 million personnel, for example—military, civil service and industry. The cutback from 1968 to 1973 involved 2.8 million, including 1.8 million from 1969 to 1971. Speculation on this point is rarely enlightened by this 2-to-1 relationship. The fact is that we have already done more "converting" than anyone is seriously proposing for the foreseeable future. But the military fundamentalists promise wonders from the defense cutbacks yet to come—unencumbered by the need to explain the results achieved from the larger cuts already made.

. . . The critics [of defense management] promise relatively easy and painless billions, to be derived by getting the war costs out of the budget and paying the peace dividend, by curtailing excessive costs and multi-billion-dollar "cost overruns," and by cutting down on the "astronomical" profits on defense work. These criticisms are usually made in the context of a defense budget that is depicted as constantly rising and dominated by the soaring costs of complex weaponry. This context facilitates an image of an $80-billion mountain of exotic hardware as the Pentagon's current annual take from the American economy. This kind of an image leaves plenty of room for excessive profits, $35 billion in cost overruns, and a $20-to-$30 billion peace dividend that has somehow been "heisted."

It isn't quite that way, though. Total defense contracts (including both R&D and production) for aircraft, missiles and space systems, electronics and communication equipment and the think-tanks, averaged $16.1 billion annually in FY 1971-72, compared to an annual average of $13.5 billion in FY 1958-61. That $2.6 billion increase should be considered in the context of 12 years' worth of general inflation, war costs (not a factor in 1958-61), and higher costs occasioned by advancing technology. Most of the $35 billion in "cost overruns," excessive profits and costs, and the diverted peace dividend would have to fit into this picture as well. To avoid this kind of clutter, the critics never mention the total annual procurement volumes they are addressing.

A $35 billion "cost-overrun" can be derived only by considering costs estimated to be incurred for a group of systems over many years, ranging from 1962 into the 1980s; including costs that have not yet been incurred, and roughly half of which have not yet even been requested of the Congress; using a misleading point of reference, an estimate made early in the life-cycle of a system, prior to the commitment of a significant percentage of the costs involved; and including as "over-runs" changes for any reason other than quantity, including, for example, cost-effective design and engineering changes that were deliberately chosen.

As to profits, the General Accounting Office (GAO)—an arm of the Congress—was directed by law to make a study of the profits on defense work. The study, which covered over half of defense procurement, showed that profits on defense work were lower than on commercial sales by the same contractors under any of the three measures employed—significantly lower under two of the measures, and slightly lower under the third. Profits after taxes on defense work averaged 2.3 percent of sales, according to the GAO. Defense purchases worldwide, for all types of goods and services from industry, under all methods of contracting, are about $36 billion per year. These figures suggest that the picture of many easy billions in excessive profits on defense work might be more than somewhat overdrawn.

No part of the peace dividend has been diverted to ongoing defense programs. This is rather easy to demonstrate. The defense dollar goes to just two places: (1) pay and allowances of military and civil service personnel and (2) purchase of goods and services from industry. In these terms:

- Military and civil service manpower of the Department of Defense was 3,720,000 in prewar June 1964, and is estimated at 3,394,000 in June 1973—down 326,000 or 12 percent.
- Purchase of goods and services from industry for National Defense amounted to $32.2 billion in FY 1964. Allowing for inflation, it would take $43 billion to buy the same goods and services in FY 1973. The FY 1973 budget provides $36 billion, a drop of 16 percent or $7 billion from what the FY 1964 program would cost at today's prices.

Defense, therefore, has less manpower than prewar, and is buying less from industry, in real terms, than prewar. It must follow that none of the manpower

FY 1973 Estimates

The budgetary data used throughout this study (for defense and other Federal programs as well) reflect the FY 1973 budget estimates as submitted in January 1972. This point in time was selected since it is the latest date at which a comprehensive and consistent set of estimates were available, covering all of the aggregates used in this study.

Budgetary estimates change frequently, however. Since January 1972, President Nixon has submitted FY 1973 budget amendments adding $1.2 billion to the National Defense spending estimates for FY 1973. There have also been increases of $5.8 billion in non-defense Federal spending estimates, and, with Congressional action on the requests, these matters are changing from day to day. These changes, while significant in absolute terms, do not alter, in any significant respect, the trends and relationships set forth in this study.

or purchasing power added for the war could have been diverted.

As a matter of fact, this marks the first time in American history that the defense budget, after or during a war, has returned to prewar levels in real terms. The defense budgets in the late 1950s were much higher than the pre-Korean (1947-50) levels. The defense budgets of the late 1940s were much higher, in real terms, than those preceding Pearl Harbor. The same pattern prevailed in earlier wars. For the first time we have returned to, and in fact gone below, the prewar level in real terms.

There is no mystery about the impact of pay and price increases upon defense, which cause current-dollar spending to remain high while programs are cut sharply in real terms. The deflators applied to defense programs are lower than those applied by the Department of Commerce to Federal purchases generally, and much lower than those for state and local purchases.

ECONOMICS OF DEFENSE SPENDING

Defense Budget Trends: An Overview

In our discussion, we shall refer to three measures of defense spending, as indicated in Table 1 below.

While the three measures closely approximate each other (the range from the smallest to the largest averages 4.2 percent from FY 1963 through FY 1973 inclusive),* it is necessary to distinguish among them. The President's Budget and the Treasury reports, for example, normally refer to National Defense outlays. Most of the material emanating from the Department of Defense, and a good deal of public discussion, centers upon the military budget. Publications oriented to NIA and GNP, such as the President's *Economic Report* and the *Survey of Current Business*, reflect NIA defense purchases. Many of the data we shall use, and the comparisons we shall make, will have specific reference to one or another of these aggregates.

The differences among these measures should not be overemphasized, however. As noted, they are normally within a few percentage points of each other. Major developments, such as war costs or increased pay costs, affect all three in about the same way. It is especially important to note that the military (active and reserve) and civil service payroll of the Department of Defense is included in all three aggregates. It appears that some observers have misunderstood the term, "defense purchases of goods and services," and have taken it to mean pur-

* The Budget of the United States Government, Fiscal Year 1973, pages 546 and 551. For the 11 years FY 1963-73, inclusive. NIA defense purchases averaged $66.1 billion; military outlays, $66.7 billion; and National Defense outlays, $68.9 billion, an average difference of 4.2% from the smallest to the largest. The largest difference was 6.4% in FY 1971.

TABLE 1. MEASURES OF DEFENSE SPENDING

	FY 1964	FY 1968 ($ in Billions)*	FY 1973 President's Budget
Outlays for Department of Defense military function, plus military assistance—we shall refer to this as the military budget, or military outlays	$50.8	$78.0	$76.5
Add Atomic Energy Commission, stockpiling, selective service, and other Defense-related activities	2.8	2.5	1.8
Equals National Defense outlays as defined in the President's Budget—we shall refer to this as National Defense outlays	53.6	80.5	78.3
Deduct most military retired pay, adjust for timing and other factors	−2.7	−4.6	−1.6
Equals National Defense purchases of goods and services in the National Income and Products Accounts—we shall refer to this as NIA defense purchases	50.9	75.9	76.7

* The Budget of the United States Government, Fiscal Year 1973, pages 546 and 551.

chases from industry. This is incorrect. The term "services" includes the services of military and civil service personnel which, in NIA parlance, are "purchased." Of the $76.7 billion in NIA defense purchases in FY 1973, the military and civil service payroll comprises about $38.7 billion, or 50.4 percent. Since military retired pay is included in full under the other two measures, pay costs comprise greater shares of the totals—54.8 percent of National Defense outlays and 56 percent of military outlays. Recent trends in NIA defense purchases military outlays and National Defense outlays have been dominated by military and civil service pay costs. Purchases from industry have moved sharply in the opposite direction.

Table 2

DOD MILITARY AND MILITARY ASSISTANCE OUTLAYS AND MANPOWER
(Military Budget)
(Outlay $ in Millions)

Current Prices	FY 1961	FY 1964	FY 1968	FY 1971	FY 1972	FY 1973
Military basic pay	$ 7,053	$ 8,511	$12,779	$16,179	$17,199	$18,532
Other Mil. pay and allowances	4,246	4,475	7,080	6,454	6,010	5,968
Military retired pay	786	1,209	2,095	3,386	3,928	4,853
Family housing, excluding pay	*	504	396	480	591	638
Civil service payroll	6,444	7,305	10,281	12,153	12,680	12,834
Total, pay and allowances	18,529	22,004	32,631	38,652	40,408	42,825
Operating costs, other than pay	5,540	6,183	12,326	11,188	10,497	10,743
Proc., RDT&E and Construction	20,576	22,599	33,071	25,706	24,895	22,933
Total, non-pay	26,116	28,782	45,397	36,894	35,392	33,676
Total outlays, current prices	44,645	50,786	78,027	75,545	75,800	76,500
Outlays, current prices, excl. Military retired pay	43,859	49,577	75,932	72,159	71,872	71,647
Constant (FY 73 Budget) Prices, Excluding Retired Pay						
Military basic pay	18,873	20,590	24,575	21,788	19,510	18,532
Other Mil. pay and allowances	5,888	6,161	9,113	7,656	6,616	5,968
Family housing, excluding pay	—	673	482	511	607	638
Civil service payroll	11,765	12,389	14,890	13,587	13,349	12,834
Total pay and allowances	36,526	39,813	49,061	43,542	40,082	37,972
O&M, excluding pay	7,448	8,254	15,014	11,920	10,788	10,743
Proc., RDT&E and Construction	27,663	30,170	40,283	27,388	25,585	22,933
Total non-pay	35,111	38,424	55,297	39,308	36,373	33,676
Total outlays, constant FY 73 prices	71,637	78,237	104,358	82,850	76,455	71,647
Manpower (Thousands)						
Military end strength (6/30)	2,484	2,685	3,547	2,714	2,392	2,358
Military average strength	2,490	2,691	3,436	2,891	2,536	2,396
Civil svc. end strength (6/30)	1,048	1,035	1,287	1,094	1,041	1,036
Civil svc. average strength	1,050	1,045	1,276	1,125	1,098	1,045
Mil. & civil svc. 6/30 end str.	3,532	3,720	4,834	3,808	3,433	3,394
Mil. & civil svc. avg.	3,540	3,736	4,712	4,016	3,634	3,441
Def.-related industry emp., 6/30	2,200	2,280	3,173	2,031	1,941	1,857
Def.-related industry emp., avg.	2,200	2,360	3,217	2,128	1,979	1,874
Total Def. related manpower 6/30	5,732	6,000	8,007	5,839	5,374	5,251
Total Def. related manpower, avg.	5,740	6,096	7,929	6,146	5,613	5,315

*Not broken out in FY 61.

Military Budget Trends

Significance of pay increases. Table 2 shows spending and manpower data for the military budget for FY 1961, the last Eisenhower year; FY 1964, the last prewar year and close to the FY 1962-65 average; FY 1968, the wartime peak; and FY 1971, 1972 and 1973. The top part of the table shows military spending in current dollars, not adjusted for pay raises and price increases. The military budget trends are summarized in Table 3 (right).

Military spending, $44.6 billion in FY 1961, $50.8 billion in FY 1964, rose to $78 billion in FY 1968, and levels off at about $76 billion in FY 1971-73. The obvious question is: why? After rising some $27 billion from prewar FY 1964 to the wartime peak, why has military spending leveled off at within about $2 billion of that level with war costs largely out of the picture?

The answer is almost as obvious as the question: pay costs. Note that the $25.7 billion increase in military spending from FY 1964 to FY 1973 consists of increases as follows:

	($ Billions)
• Pay and allowances	$20.8
• Operating costs other than pay	4.6
• Procurement; Research, Development, Test and Evaluation (RDT&E); and construction	.3
Total	25.7

This is in spite of the fact that military and civil service manpower *declines* by 326,000 from FY 1964 to FY 1973.

From FY 1968 to FY 1973, military spending drops by $1.5 billion, the net of:

	($ Billions)
• An increase in pay and related costs	$+10.2
• A decrease in operating costs, other than pay	−1.6
• A decrease in procurement, RDT&E and construction	−10.1
For a net decrease of	−1.5

This, in spite of the fact that military and civil service manpower *drops* by 1,440,000 from FY 1968 to FY 1973.

Measuring from the last Eisenhower year (FY 1961) pay and related costs are up by about $24 billion, while military and civil service manpower is down by 138,000.

It ought to be obvious that something quite significant is going on in the pay area. That $24 billion *increase* since FY 1961 is more than incremental war spending at the peak ($21.5 billion in FY 1969), and greater than the *total* that will be spent for investment in FY 1973 —for RDT&E, for military construction, and for procurement of ships, aircraft, missiles, ammunition, and all other weapons and major items ($22.9 billion).

The largest current defense weapons programs are for aircraft, missile and space systems, and electronics. Together, these now amount to about $16 billion per year. The $24 billion *increase* in pay costs since FY 1961 is half again as great as this *total* that is being invested in these systems, procurement and RDT&E together. Total pay costs in FY 1973 ($42.8 billion) are nearly three times as great as that investment total.

Investment (procurement, RDT&E and construction) spending increases, from FY 1961 to FY 1973, by $2.3 billion. Payroll spending increases by $24 billion—more than 10 times as much. From prewar FY 1964 to FY 1973, the increases are $334 million and $20.8 billion, respectively—pay rises 62 times as fast as investment.

We hope that the point is clear by now: that one cannot begin to understand defense budget trends (military spending, National Defense spending, or NIA purchases) without an appreciation of the explosive impact of increasing pay costs. It is striking indeed that [a highly regarded economics journal] recently devoted 40 pages to" The Economics of the Military-Industrial Complex" without a single reference to pay trends—indeed, without even a hint at or an allusion to this matter.* In most leagues, this kind of performance would earn for its perpetrators a protracted spell upon the bench. In fact, we do not recall a single book or article by a critic of defense programs which mentions these pay trends. If the point is understood at all, it is apparently regarded as superior tactics to ignore the matter, leaving the impression that the spending increases have gone into weapons procurement.

Pay increase details. To remedy this oversight, let's return to Table 2. Military basic pay and items denominated therein (such as separation pay, re-enlistment bonus, and FICA) amounted to $8.5 billion in FY 1964 and rise to $18.5 billion in FY 1973. The middle portion of the table shows that—at FY 1973 budget pay rates—basic pay for the FY 1964 force would have been $20.6 billion—141.9 percent more, without add-

TABLE 3. SUMMARY OF MILITARY BUDGET TRENDS

(Outlays in $ Billions)

	FY 1961	FY 1964	FY 1968	Est. FY 1973
Pay and allowances	$18.5	$22.0	$32.6	$42.8
Operating costs other than pay	5.5	6.2	12.3	10.7
Procurement, RDT&E and construction	20.6	22.6	33.1	22.9
Total	44.6	50.8	78.0	76.5
Active military personnel, June 30 (000)	2,484	2,685	3,547	2,358
Civil service personnel, June 30 (000)	1,048	1,035	1,287	1,036
Total personnel, June 30 (000)	3,532	3,720	4,834	3,394

* "The Economics of the Military Complex," five articles published in the American Economic Review, Papers and Proceedings, May, 1972, pages 279-318.

ing or promoting a man. Details of these increases are presented in the full report. A few examples are shown in Table 4 (right).

July 1963 and July 1967 were the first months of FY 1964 and FY 1968, respectively. When these rates are converted to a full-year basis, and applied grade-for-grade to average FY 1964 manpower, the result is an average increase in basic pay of 134.5 percent, from the full year FY 1964 to the full year FY 1973. Other items denominated in basic pay have risen even more (230.8 percent). FICA, for example, is up 252.3 percent, and a variable re-enlistment bonus was added in 1966. The result, then, is that basic pay and items denominated therein have risen by 141.9 percent from FY 1964 to those contemplated to be in effect, by law, in the FY 1973 budget. If we simply applied the FY 1973 pay tables to the FY 1964 force, the cost would be $20.6 billion, or $12.1 billion more than the actual cost in FY 1964.

Other military pay and allowances include such items as quarters, subsistence, and clothing allowances, flight pay, movement costs incident to permanent change of station, overseas station allowances and many more. About 70 percent of these are paid in cash and 30 percent in kind. Some are fixed in specific amounts by law (such as flight pay and quarters allowances) while others vary with general price-level movements, such as food procured for mess halls. Some new special pays and allowances have been added since FY 1964. It is shown that for the FY 1964 force these costs would amount to $6.2 billion in FY 1973 as compared to the $4.5 billion actually paid in FY 1964.

TABLE 4. BASIC PAY PER MONTH

	July 1963	July 1967	Jan. 1973	Percent Increase July 1967-Jan. 1973	Percent Increase July 1963-Jan. 1973
E-1 Recruit	$78.00	$90.60	$332.10	266.6%	325.8%
E-9 Sergeant Major	440.00	599.10	1,014.00	69.2%	130.5%
O-1 Second Lieutenant	222.30	303.90	676.80	122.7%	204.5%
O-6 Colonel	985.00	1,216.50	2,057.40	69.1%	108.9%

Military retired pay, amounting to $1.2 billion in FY 1964, rises to $4.9 billion in the FY 1973 budget. The retired population has increased, but most of the increase results from pay increases, cost-of-living increases (automatic, under the law) and proposed legislative changes reflected in the FY 1973 estimates. A separate current-price total is shown, from which retired pay is excluded. The constant-price section of the table also excludes retired pay. This is in line with the approach used in stating NIA defense purchases, which excludes most retired pay. It is important to note, though, that retired pay represents an added cost of $3.6 billion since pre-war FY 1964, which does not add a man or a piece of equipment to the force.

The cost of family housing for military personnel is shown in this section, because this is an "in-kind" item that should be related to the cash quarters allowance reflected on the second line. The purchases deflator (discussed below) is used here.

The civil service payroll, $7.3 billion in FY 1964, rises to $12.8 billion in FY 1973. The pay increase is 69.6 percent in this case, so that FY 1964 manpower would have cost $12.4 billion at FY 1973 rates.

To summarize, then, pay and related costs were $22 billion in FY 1964. Excluding retired pay, these costs were $20.8 billion. Without adding or promoting a man, these costs (excluding retired pay) would be $39.8 billion at FY 1973 rates. Defense manpower (military and civil service) is, in fact, down from FY 1964 to FY 1973, and FY 1973 payroll costs (again excluding retired pay) are estimated at $38 billion. The largest parts of the pay increases, by far, have occurred since FY 1968.

Purchase prices rise by an estimated 33.5 percent from FY 1964 to FY 1973. The year-to-year increase in purchase prices covers all the goods and services purchased from industry, except for clothing, rations and transportation costs already covered in connection with manpower costs. The term "goods" covers everything from weapons to office supplies, and "services" include transportation, communications, contractual equipment maintenance, and so forth.

Figures through FY 1971 were fur-

TABLE 5. COMPARISON OF MILITARY PURCHASE PRICES

($ In Billions)

Current Prices	FY 1961	FY 1964	FY 1968	FY 1973
Military retired pay	$ .8	$ 1.2	$ 2.1	$ 4.9
All other pay and allowances	17.7	20.8	30.5	38.0
Operating costs, excluding pay	5.5	6.2	12.3	10.7
Procurement, RDT&E and construction	20.6	22.6	33.1	22.9
Total, current prices	44.6	50.8	78.0	76.5
Total current prices, excluding retired pay	43.9	49.6	75.9	71.6
In Constant (FY 1973) Prices, Excluding Retired Pay				
Pay and allowances	36.5	39.8	49.1	38.0
Operating costs, excluding pay	7.4	8.3	15.0	10.7
Procurement, RDT&E and construction	27.7	30.2	40.3	22.9
Total, constant (FY 1973) prices	71.6	78.2	104.4	71.6

nished by the Bureau of Economic Analysis (BEA), Department of Commerce. These represent the non-compensation component of the deflator for Federal purchases of goods and services. The data are based mainly on components of the wholesale price index, weighted in accordance with the proportion of Federal purchases in each segment. Other indices are used by BEA for services and construction. It should be emphasized that these figures are not based upon an analysis of defense price experience. They represent, rather, an approximation of the inflation rates that any buyer would experience who was dealing with the same wholesale segments. The FY 1972 and FY 1973 figures are Department of Defense estimates. They assume price increases of 3.7 percent in FY 1972 and 2.8 percent in FY 1973.

The result may be summarized as shown in Table 5 (opposite page).

Excluding retired pay, the manpower and procurement program, which cost $49.6 billion in FY 1964, would cost $78.2 billion at FY 1973 pay rates and price levels—an increase of $28.7 billion without adding or promoting a man and without procuring any additional goods or services from industry. Projected FY 1973 military spending (again excluding retired pay) is $71.6 billion, about $6.6 billion (eight percent) below the FY 1964 level in constant prices. In the same terms, FY 1973 military spending is about equal to FY 1961 (the last Eisenhower year), and about 31 percent below the FY 1968 wartime peak.

Setting aside military retired pay, military spending must go to one of just two places: (1) military and civil service pay and allowances; or (2) purchase of goods and services from industry. In these terms:

- From FY 1968 to FY 1973, military and civil service manpower is reduced by 1,440,000 (30 percent). Purchases from industry, in constant prices, fall from $55.3 billion to $33.7 billion, or 39 percent.
- From prewar FY 1964 to FY 1973, military and civil service manpower falls by nine percent (326,000) and purchases from industry drop by 12 percent in constant prices (from $38.4 billion to $33.7 billion).
- Measuring from FY 1961 (the last Eisenhower year), military and civil service manpower will be down 138,000 (four percent) in FY 1973. Purchases from industry will be down about three percent.

Constant Price and Program Trends

Table 6 presents data of defense programs in current and constant prices for selected years from FY 1939 to FY 1973. The table shows both CY 1958 prices, the normal basis for stating NIA data, and FY 1973 prices, to provide a framework for the programs now under consideration.

Those familiar with NIA data can check deflators used here for NIA defense purchases with those used by the Department of Commerce for Federal purchases in total. They will find that these deflators are somewhat flatter (that is, they reflect less inflation) than those for the Federal Government as a whole.

Note that FY 1973 outlays for National Defense, in constant FY 1973 prices, are $34.3 billion (about one-third) below the FY 1968 wartime peak. These outlays have fallen sharply in each of the past five years, and FY 1973 outlays represent the lowest level since FY 1951. NIA purchases have also fallen sharply, and are nearing a 22-year low.

(Continued on Page 15)

Table 6

DEFENSE PROGRAMS IN CURRENT AND CONSTANT PRICES*
($ in Billions)

Fiscal Year	Current Prices			CY 1958 Prices			FY 1973 Prices		
	Military Budget	National Defense	NIA Purchases	Military Budget	National Defense	NIA Purchases	Military Budget	National Defense	NIA Purchases
1939	$ 1.1	$ 1.1	$ 1.1	$ 2.7	$ 2.7	$ 2.7	$ 4.5	$ 4.5	$ 4.5
1945	79.9	81.6	88.3	149.5	152.7	165.2	251.0	257.0	274.0
1950	11.9	13.1	13.0	15.1	16.7	16.8	29.7	32.6	32.7
1953	47.7	50.4	48.6	55.5	58.5	56.9	94.9	100.1	97.9
1956	37.7	40.3	39.0	40.4	43.3	42.3	71.0	76.0	74.7
1961	44.6	47.4	46.3	42.4	45.0	44.7	71.6	76.0	75.6
1964	50.8	53.6	50.9	46.4	49.0	47.3	78.2	82.6	80.2
1968	78.0	80.5	75.9	63.0	65.0	62.5	104.4	107.8	104.3
1971	75.5	77.7	73.0	49.1	50.5	49.3	82.9	85.2	83.6
1972 est.	75.8	78.0	73.3	45.6	46.9	46.3	76.5	78.8	78.0
1973 est.	76.5	78.3	76.7	42.7	43.7	46.1	71.6	73.5	76.7

*Military budget and National Defense figures are outlays. NIA purchases exclude most military retired pay in all cases. Retired pay is included in the current price columns for the military budget and National Defense, to match the budget, but excluded from the constant-price columns, for comparability with NIA.

THE MYTHS—

AND THE REALITIES

Myth: The National Defense budget continues to grow.
Reality:

- Fiscal Year 1973 spending will be the lowest, *in real terms,* since FY 1951. None of the real growth in the economy over the past twenty-two years is currently allocated to National Defense.
- Since the wartime peak (FY 1968), defense manpower (military, civil service, and defense-related industry) falls by 35 percent or 2.8 million. Purchases from industry fall by 40 percent or $22 billion in constant prices.

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Myth: In recent years, many additional billions of dollars have been poured into weapons systems and facilities.
Reality:

- Over the past nine years, funds for procurement, research and development and military construction, have increased by only four percent or $900 million. In terms of real buying power, these funds have decreased by 24 percent in the same period.

Myth: The country is operating under a wartime economy; or, Defense spending is the root of all economic ills.
Reality: We had a war economy in 1945 and in 1953 (Korea), but *not* in recent times.

- In constant 1958 prices, Defense spending in 1945 was $1.53 billion; social and economic spending was $34 billion.
- Again in constant 1958 prices, social and economic spending will be $145 billion in 1973; Defense $44 billion.
- In 1945, total public employment was 19 million, of which 78 percent went to Defense. In 1973, the total will be 16 million, with 79 percent to *non-Defense* purposes.
- Since 1961, the economy has created 16 million new jobs, while Defense employment for all purposes has decreased.
- Those who say that Defense is dominant are pretending that non-Defense public spending does not involve real money or real people.

Myth: The defense budget dominates public spending.
Reality:

- In FY 1973, Defense will account for about 20 percent of public spending, about 21 percent of all public employment and just over 6 percent of the gross national product (GNP); the lowest shares in more than 20 years.

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Myth: Defense spending is a dominant factor in the balance of payments (BOP) problem.
Reality: Defense did play a major role in the past, but not any longer.

- In the FY 1956-59 era, foreign expenditures by Defense were equivalent to 24.4 percent of merchandise imports.
- In FY 1972, Defense foreign expenditures have fallen to 9.9 percent of merchandise imports. The $3 billion Defense deficit makes up a relatively small part of the $28 billion total deficit.

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Myth: Defense is placing an inordinate drain on the Nation's research and development resources.
Reality:

- Defense-related research and development is smaller (in real terms) in 1972 than in 1958 or any year since.

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Myth: Defense has contributed to the inflation and BOP problems, causing higher prices and lower productivity in the U.S. industry.
Reality:

- Inflation in the U.S. has been most severe since 1968, a period when Defense programs were being massively cut back.
- The aircraft industry—20 times more dependent on Defense than U.S. industry in general—shows productivity increases nearly double the average and has the best balance of trade record in the U.S. economy.
- Inflation has been the most severe in those industry sectors where the defense input is the smallest, and conversely. For example: the greatest inflation by far (76.4 percent, 1964-71) is in construction, where defense accounts for less than 1 percent of the business. Five sectors have had above-average inflation, and defense accounts for less than 1 percent of the business in four of them, and 2.7 percent in the fifth.
- According to Department of Commerce figures, inflation on state and local government purchases has been much greater than on defense purchases.

Myth: Defense takes 60 percent or more of the tax dollar.
Reality: In FY 1973 Defense accounts for 31 percent of Federal spending and about 20 percent of all public spending, the lowest since before Pearl Harbor. The myth is rationalized by these distortions:

- Adding to the cost of National Defense the costs of the Federal debt, veterans programs, international programs and space programs.
- Not counting huge amounts of Federal taxing and spending which, at $72.5 billion in FY 1973, nearly equal the entire National Defense budget.
- Ignoring state and local spending altogether which in FY 1973 amount to $182.5 billion (2.3 times National Defense spending) and which comes from the same taxpayers, and a large part of which is financed through the Federal budget.

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Myth: The peace dividend has been stolen.
Reality: Since the peak of the war in 1968, there have been massive Defense cuts which should have resulted in massive spending cuts of about $24 billion. But there is only a $1.5 billion drop in the budget. Why?

- Pay increases to military and civil service personnel account for $16.3 billion.
- General inflation on purchased goods and services eats up $6.2 billion.
- These add up to $22.5 billion: pay and price increases have offset the massive force reductions. Without these increases, the FY 1973 budget would be $54 billion.

★ ★ ★ ★

Myth: Defense squanders billions in weapons system "cost overruns."
Reality: Alleged "cost overruns" of tens of billions are arrived at by comparing current estimates of all-time (concept to completion of production) costs to very early "planning estimates." Only about half the money referred to in "cost overrun" figures has ever been requested of Congress, much less appropriated or spent. Costs of Defense programs increase just as costs in every aspect of our society increase for many valid reasons not associated with waste and mismanagement.

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Myth: Defense contractors make exorbitant profits.
Reality: The General Accounting Office (GAO) found in a recent study that rates of return for contractors on Defense work were 4.3 percent of sales before taxes and 2.3 percent of sales after taxes—significantly lower than on comparable commercial work.

TABLE 7. DEFENSE MANPOWER
(Thousands, June 30)

June 30	Active Duty Military	Civil Service	Total Direct	Def.-related Employment in U.S. Industry	Total
1939	334	196	530	NA	NA
1945	12,123	2,628	14,751	NA	NA
1950	1,460	729	2,189	525	2,714
1953	3,555	1,340	4,895	3,300	8,195
1956	2,806	1,185	3,991	2,000	5,991
1961	2,484	1,048	3,532	2,200	5,732
1964	2,685	1,035	3,720	2,280	6,000
1968	3,547	1,287	4,834	3,173	8,007
1971	2,714	1,094	3,808	2,031	5,839
1972 est.	2,392	1,041	3,433	1,941	5,374
1973 est.	2,358	1,036	3,394	1,857	5,251

Note: These figures cover only manpower deriving from the military functions of the DoD and Military Assistance (that is, the military budget). They do not include AEC manpower, or the smaller amounts for other defense-related activities.

U.S. industry employment represents the estimated total which would derive from purchase spending in the U.S., and is not confined to procurement of purely military items or to what would normally be considered as defense contractors. BLS averages on this basis are available for 1965 and for 1968-71. June figures were derived by DoD from these BLS averages. The figures for 1961 and earlier are DoD estimates, based on a highly-simplified application of the BLS methodology. The 1972 and 1973 figures are DoD estimates.

TABLE 8. DEPARTMENT OF DEFENSE BUDGET
SELECTED GENERAL PURPOSE AND STRATEGIC FORCE COMPARISON
(As of June 30 in years indicated)

General Purpose	1950	1953	1956	1961	1964	1968	1973
Army Division	10	20	18	14	16 1/3	18	13
Attack/ASW Carriers	15	29	24	24	24	23	16
Carrier Air Wings	NC *	NC	NC	24	24	23	13
Marine Divisions/Wings	2/2	3/3	3/3	3/3	3/3	4/3	3/3
Air Force Tactical Squadrons	NC	NC	NC	93	119	144	103
Commissioned Ships in Fleet	598	1,129	973	819	932	932	594
Active Aircraft (total, all types)							
Fixed Wing	22,962	35,521	42,650	27,215	25,160	24,095	18,640
Helicopters				4,047	5,148	10,188	11,689
Strategic							
ICBM Launchers: Minuteman					600	1,000	1,000
Atlas					108	54	54
Titan				28	113	0	0
SLBM: Launchers				80	336	656	656
Submarines				5	21	41	41
Strategic Bombers (Active Aircraft Inventory)				1,645	1,277	648	511
Manned Fighter Interceptor Squadrons	36	78	96	54	40	24	7

*NC: Not available on comparable basis.

(Continued from Page 11)

Table 7 reflects defense manpower trends over the same years. Manpower (military, civil service, and industry) falls 2.8 million (35 percent) from 1968 to 1973, and will be about 749,000 (12½ percent) below the prewar (1964) level. Defense manpower is already at the lowest levels since 1950, and will drop further by June of 1973.

Table 8 provides data on certain forces from 1950 to 1973. General purpose forces consume the bulk of the manpower and money. With the exception of helicopters, these forces have been sharply cut back from 1968 to 1973; not only that, the 1973 forces are below the prewar (1964) level and are, in fact, at the lowest levels since 1950.

In summary, pay and price increases —especially the former—have been very large since 1964 or 1968, and have masked the huge cutbacks that have been made in manpower, weapons procurement, and forces. National Defense spending in real terms, as well as manpower and forces, are at the lowest levels in more than 20 years. The pay and price increases mentioned here are by no means unique to defense; they have had a comparable or greater impact upon other spending sectors as well. But the point to be emphasized here is this: the starting point for the current debates about defense spending, the National Defense program proposed in the President's FY 1973 budget, represents the lowest program, in real terms, for 22 years.

ECONOMICS OF DEFENSE SPENDING

PROCUREMENT TRENDS

Most public discussion of the defense budget tends to center on the development and procurement of major weapons systems. This is especially true with respect to critical discussion. The impression is created that these major weapons consume the greatest part of the defense budget and that spending in these areas has been growing rapidly. This is done more by implication and innuendo than by explicit statement. The critics rarely present figures in a comprehensive and systematic fashion.

For example, some critics* have directed their attention almost exclusively to the area of major weapons systems and to the industries producing these systems. While some shockingly large figures were cited, the authors never attempted to prove that this is a large growth area. It was simply assumed that this was so, and the articles were devoted to explaining why this was so—indeed, in some cases, why it must inevitably be so in a capitalistic economy. But it isn't so.

Table 9 (Page 16) presents data on this point. It is organized so as to show the various types of concerns in descending order within the military-industrial complex. The first group includes aircraft, missile and space systems, electronics, and educational and non-profit institutions. This is certainly the heart of the military-industrial complex, as we believe most observers would agree. These are high-technology areas, and the firms involved here are dependent upon defense for at least a significant portion of their business.

The next groups—ships, weapons and ammunition—have a high degree of defense-dependency, but are significantly lower in technology than the first group. Tank-automotive, miscellaneous hard goods, and construction are generally lower technology areas and they involve industry sectors where defense production is a very small portion of the total.

Soft goods and services include, largely, petroleum products, food, clothing and textiles, medical services and supplies, spare parts, travel and transportation, communications, equipment and real property maintenance and other supplies and services. By and large, these are low-technology areas (at least in the sense of military-related technology) and they involve concerns that are not heavily dependent upon defense work.

Four time periods are shown in Table 9: the average for FY 1958-61, the last four Eisenhower years; the average for FY 1962-65, the Kennedy-Johnson pre-war years; the average for FY 1967-68, when war contracting peaked; and the FY 1971-72 average—the latest years for which contract data are available. FY 1966 and FY 1969-70 were buildup and phasedown years, respectively. The figures in the top part of the table are in current prices. Those at the bottom are shown in constant CY 1958 prices.

The first grouping in Table 9 includes aircraft, missile and space systems, electronics and communications equipment, and educational and non-profit institutions. In the last four Eisenhower years, contracts in this area averaged $13.5 billion per year. This rose to $15.1 billion in the 1962-65 period and to $18.8 billion at the wartime peak, and has now fallen to $16.1 billion per year. These figures, it is emphasized, are in current prices—not adjusted for inflation. And this is the high-technology heart of the complex. This is the area above all in which resounding charges have been made regarding multi-billion dollar over-runs, gold plating, and excessive profits. In comparing the FY 1958-61 figures with those for FY 1971-72, it is necessary to recognize about 12 years worth of general inflation, war costs and cost increases due to higher technology, in addition to management errors of the types just mentioned. And all of this adds up to a growth of about $2.6 billion, or about 19 percent, from the average of the last four Eisenhower years.

Moving to the bottom part of the table, we find that, in constant prices, this area is down 8 percent from the 1958-61 period, and down 16 percent from the 1962-65 period. This is allowing only for general inflation (roughly 30 percent for 12 years).

In short, this area of the military budget, which is the target of so many sensational charges, has grown hardly at all since the 1950s, and has, in fact, dropped—if allowance is made for general inflation. It amounts to about $16 billion altogether, about 20 percent of the military budget. In the 1958-65 time frame, more than 30 percent of the military budget was devoted to this area. It is interesting to note, too, that while contracting in the high-technology weapons

* American Economic Review, Papers and Proceedings, May 1972, pages 279-318.

area has grown just $2.6 billion from the last Eisenhower term, pay costs have grown by about $24 billion—nine times as much—over the same time period (see Table 2, page 8).

None of this is made plain in critical publications such as "The Economics of the Military-Industrial Complex." * None of the contributors mentioned that they were dealing, essentially with about 20 percent of the military budget, and in absolute (constant-price) terms as well. No systematic data were presented to serve as benchmarks. These omissions, coupled with sensational charges of multi-billion dollar boondoggles, could easily lead readers to conclude that a large part of the Defense budget increase since the 1950s has gone into aircraft and missiles rather than into the military and civil service payroll.

Moving along in Table 9, adding ships, weapons and ammunition to the areas covered so far, we reach a total of $21.1 billion in FY 1971-72. This is about where one would have to draw the line in terms of a reasonable definition of the industrial side of the military-industrial complex. Generally, firms above

* Ibid.

Table 9

DEPARTMENT OF DEFENSE PRIME CONTRACT AWARDS
($ Billions)

	Fiscal Year Averages			
Current Prices	**1958-1961**	**1962-1965**	**1967-1968**	**1971-1972***
Aircraft	$ 5.9	$ 5.6	$ 9.6	$ 7.3
Missile and space systems	4.5	5.8	4.5	4.8
Electronics and communications equipment	2.7	3.0	3.9	3.3
Education and non-profit institutions	.4	.6	.8	.7
Subtotal	13.5	15.1	18.8	16.1
Ships	1.0	1.6	2.0	2.4
Weapons	.2	.2	.6	.3
Ammunition	.4	.8	4.0	2.3
Tank-Automotive	.5	.9	1.4	.7
Miscellaneous hard goods	.9	1.1	2.4	1.0
Construction	1.3	1.3	1.2	1.4
Total, major items, hard goods and construction	17.8	21.0	30.5	24.3
Soft goods and services	5.6	6.5	11.0	9.5
Work performed outside United States	1.3	1.4	2.7	2.0
Total prime contract awards	24.7	28.9	44.2	35.8
Constant (CY 1958) Prices				
Aircraft	5.9	5.4	8.6	5.5
Missile and space systems	4.4	5.6	4.1	3.6
Electronics and communications equipment	2.6	2.9	3.5	2.5
Educational and non-profit institutions	.4	.6	.7	.6
Subtotal	13.3	14.6	16.8	12.2
Ships	1.0	1.5	1.8	1.8
Weapons	.2	.2	.6	.2
Ammunition	.4	.8	3.6	1.8
Tank-Automotive	.5	.9	1.3	.5
Miscellaneous hard goods	.9	1.1	2.2	.8
Construction	1.3	1.2	1.0	.8
Total, major items, hard goods and construction	17.6	20.2	27.2	18.1
Soft goods and services	5.5	6.3	9.8	7.2
Work performed outside United States	1.3	1.3	2.4	1.6
Total awards, constant prices	24.4	27.8	39.4	27.0

* FY 1972 data are preliminary

this point are involved to a high-degree in military-related technology, a high-degree of dependence upon defense work, and a limited potential for entrance to civilian markets without extensive restructuring.

We suggest two points here. First, this area, which represents essentially the totality of the purely military industrial effort and the hard core of any industrial conversion problem, amounts to about $21.1 billion—not $80 billion, which could easily be inferred from some discussions of the military budget. Second, the 1971-72 volume in constant prices is only slightly above the FY 1958-61 level and that entirely due to ammunition. This area has grown very little, and its relative impact upon the 1972 economy is about half what it was in 1958-61. Ammunition production has already been sharply cut back. From FY 1969 to FY 1971, for example, ammunition procurement fell by 60 percent.

The last group of items shown on Table 9 are soft goods and services and work performed outside the United States. These two areas may be grouped in assessing trends. As the figures show, these costs rose to the wartime peak and have fallen since FY 1967-68. The constant-price increase from FY 1962-65 to FY 1971-72 is more than accounted for by war costs in the latter period.

Increases in this area from the earlier periods involve commercial travel and transportation costs, ship and aircraft fuel, and other supplies and services associated with the war. In addition, there have been sharp increases in the personnel-support area, involving medical programs, overseas dependent education, higher standards of maintenance in troop housing, expanded recruiting efforts, and other activities. It is reasonable to say that these kinds of activities do not coincide with the images that are conjured up by reference to the industrial side of the military-industrial complex.

To summarize Table 10 (right) shows changes in prime contract awards, comparing the most recent data with earlier periods.

For example, from the last four Eisenhower years to FY 1971-72, prime contract awards (in constant prices) increased by $2.6 billion. This was the net of a $3.4 billion increase in war costs and an $.8 billion decline in other costs. Alternatively, the $2.6 billion increase was the net of increases of $3.4 billion for ammunition and soft goods and $.3 billion in other areas, offset by a decrease of $1.1 billion for aircraft, missiles, space and electronic systems.

Comparing FY 1971-72 with any of the earlier periods, the only increases of any significance that can be found involve ammunition and soft goods and services. The high-technology heart of the complex —aircraft, missiles, space, and electronics—is down by any comparison.

Much of the criticism of defense programs is based, as we have noted, upon the assumption of consistent and rapid (if not runaway) growth in military-industrial spending, especially in the high-technology area to which the bulk of the attention is devoted. The facts show these assumptions to be incorrect.

The contracting figures in Table 9 may be related, in a general way, to the spending figures in Table 2. For example, the $28.9 billion contracting average for FY 1962-65 (Table 9) is reasonably close to the $28.8 billion in FY 1964 non-pay spending (Table 2). The $21 billion FY 1962-65 contracting average for major items, hard goods and construction in Table 9 is roughly related to the $22.6 billion in FY 1964 spending for procurement, RDT&E and construction shown in Table 2. There are differences between the non-pay spending series in Table 2 and the contracting series in Table 9, both as to content and timing. However, many of the content differences tend to cancel out.* The important point is that the contracting picture presented in Table 9 is fully consistent with the data on actual and projected spending presented earlier.

Under the President's budget as submitted in January 1972, prime contract awards were estimated at $36.3 billion in FY 1973—somewhat below the FY 1971-72 average (in constant prices). Since that time, the stepped-up war activity stemming from last spring's North Vietnamese invasion has added to defense requirements. At the same time, strategic requirements have declined—due to the arms limitation agreement—and there have been some other reductions. In the net, it is likely that FY 1973 awards will be slightly above the FY 1972 level, rather than slightly below. These additional awards would largely involve ammunition, soft goods, and services. The balance of the contracting area would probably have close to zero change, with the reductions mentioned largely offsetting and war-related increases.

In summary, there is nothing in the FY 1973 picture, insofar as we can foresee it at this writing, which would significantly alter what has been said earlier.

* From FY 1958 to FY 1972, 15 years inclusive, contract awards (as shown in Table 9) averaged $32,641 million per year. From FY 1959 to FY 1973, 15 years inclusive, non-pay spending (as in Table 2) averaged $362,204 million per year—within about 1/10 of 1% of the contract awards. This indicates that the differences in content tend to cancel each other. The spending data were lagged one year to allow for lead-time.

TABLE 10. CHANGES IN PRIME CONTRACT AWARDS IN CONSTANT (CY 1958) PRICES, $ BILLIONS, COMPARING FY 1971-72 AVERAGE WITH AVERAGE FOR:

	FY 1958-1961	FY 1962-1965	FY 1967-1968
Average annual prime contract awards in indicated periods	$24.4	$27.8	$39.4
Average prime contract awards, FY 1971-72	27.0	27.0	27.0
Net Change	+2.6	−.8	−12.4
Incremental war costs	+3.4	+3.3	−8.4
All other	−.8	−4.1	−4.0
Net Change	+2.6	−.8	−12.4
Ammunition	+1.4	+1.0	−1.8
Soft goods and services	+2.0	+1.2	−3.4
Aircraft; missile and space systems; electronics and communications equipment; and educational and non-profit institutions	−1.1	−2.4	−4.6
All other	+.3	−.6	−2.6
Net Change	+2.6	−.8	−12.4

Defense and the Economy

In World War II, defense spending totally dominated the public spending picture and indeed the entire economy. Twenty years ago, when Korean War spending reached its peak, defense accounted for nearly two-thirds of the entire Federal budget, and for almost half of all public spending—Federal, state and local. Defense manpower, military and civil service, amounted to nearly half of all public payrolls in the United States. Defense manpower and defense spending, then, were equal to the manpower and the spending of all other units of government—Federal, state and local.

But that was twenty years and more ago. Conditions were a great deal different in the 1960s, and are continuing to change. Defense simply does not occupy the position of dominance that it held in the 1940s and 1950s. There are many, however, who have apparently failed to notice these changes. At the extreme are those who maintain that we have a war economy, and who attribute all our economic ills to defense programs: deficits, inflation, price controls, balance of payments difficulties, power and transportation problems, high taxes, and the rest. These are the hard-core military fundamentalists. They are the counterparts of the agrarian fundamentalists of an earlier day, who attempted to explain everything in the economy, the Nation and the world in terms of what happened on the farm. The agrarian fundamentalists hung onto their doctrines long after we had become industrialized, and the military fundamentalists are likewise impervious to a changing reality.

Military fundamentalism is not restricted to a hard core, however. The are many who would assign to defense a major role in economic developments, especially with regard to inflationary pressures, public spending and the balance of payments. In this section, we will try to place the economic impact of defense programs in a proper perspective.

ECONOMICS OF DEFENSE SPENDING

The Twilight of Cold War Economics

While conditions have changed dramatically in the past 20 years, the military fundamentalists seem to have a fixation with the economics and the budgetary allocations of the early cold war period. Their arguments seem to be rooted in the budget for 1953, and they have so far been able to overlook the radical transformations that have taken place:

- FY 1973 spending for National Defense, in dollars of constant buying power, is at the lowest level for more than 20 years.
- In the same terms, National Defense spending has dropped sharply in each of the past five years. This cutback amounts to about $34 billion at FY 1973 budget pricing, or a 32 percent cut since FY 1968. In terms of manpower (including industry), the cut involves nearly 2.8 million, about 35 percent. This cutback is the largest in history, excepting only that following World War II.
- In FY 1953, defense spending was nearly double that of all other Fedal agencies combined. Today, that relationship is more than reversed—other Federal agencies spend more than twice as much as defense.
- In FY 1953, defense spending was nearly double that of all state and local governments combined. This relationship, too, is more than reversed—in FY 1973, state and local spending will be more than double that for defense.
- In FY 1953, defense manpower—military and civil service—was nearly equal to all other public employment, Federal, state, and local, combined. In FY 1973, other public employment will exceed defense manpower by a factor of nearly four to one.
- The defense shares of public spending, GNP, the labor force, and other financial and manpower aggregates are in all cases the lowest for more than 20 years, and in some cases the lowest since before Pearl Harbor.

These facts, and others which we are presenting, have some important implications. Among these implications are the following:

- We can no longer regard the defense budget as the central element in our resource-allocation problem.
- One is not well-advised to seek the answers to our economic problems in defense budget trends—whether those problems involve inflation, productivity and civilian technology, balance-of-payments concerns, or the public spending crunch.

Defense has an impact in these areas, to be sure. But the size of the impact is only a small fraction of what it once was, and it is now possible for the economic aggregates to move in ways which simply cannot be explained in terms of defense trends.

There is a strong tendency in many quarters to ignore these developments, which amounts to an obsession with defense spending. There are many reasons for this—first among them the extreme unpopularity of the war in Southeast Asia. This, in turn, has provided fertile ground for the highly-publicized allegations of multi-billion management errors and waste in defense spending. Budgetary mechanics undoubtedly play a role. Defense continues to be financed largely through a single, widely publicized appropriation bill each year; domestic spending, now much greater than defense spending, has followed a different route. The procedures are such that few are aware of the magnitude of domestic spending, and there seems to be a view in some quarters that it is not real money anyway. At the same time, we face a crunch of the first magnitude in public finance. Domestic spending needs have grown far more rapidly than revenues. The appropriations process, which covers a progressively diminishing share of the public resource picture, continues to be the only systematic mechanism available to the Congress for resource allocation. Another problem, similar to that of budgetary mechanics, arises from the fact that many who follow economic developments get their information from publications oriented to the national income accounts. These series cover, for the period involved here, some 95 percent to 98 percent of defense spending, but less than 20 percent (and the percentage is declining) of non-defense Federal spending. These data are not intended to represent the totality of spending and resultant taxing but, presented as they are, they can easily foster the misconception that non-defense spending continues to be an insignificant part of the total. The total taxing and spending picture—Federal, state and local—is almost never pulled together in one place and it is even more rare for projections to be reflected on this basis. Pay and price increases have contributed immensely to the misunderstanding. It is a fact that, in dollars of constant (FY 1973) buying power, National Defense outlays have fallen by some $34 billion since FY 1968; it is also a fact that spending in current dollars has dropped only $2 billion, with pay and price increases (largely pay increases) consuming the difference. It is easy to grasp the fact that defense spending, in current dollars, is near the 1945 and 1968 wartime peaks, and 50 percent above the 1953 or 1964 levels; the fact, equally valid, that the current program in real terms represents a 20-year low is not nearly so obvious.

"... Domestic spending needs have grown far more rapidly than revenues. ..."

It is understandable, then, that there are some profound misconceptions about the role of defense in the American scene. But whatever the reasons for them, the fact remains that these misconceptions are indeed profound. Critics of defense programs are able to ignore facts such as these:

- Non-defense spending rises by $109 billion from FY 1964 to FY 1973, including $92 billion for social and economic spending—the *increase* alone is far more than the *entire* defense budget.
- State and local spending over the same period rises by $113 billion—another *increase* equal to more than the *entire* defense budget.
- Non-defense public employment *increases* by 4.1 million from FY 1964 to FY 1973. This *increase* is greater by a substantial amount than the *total* military and civil service manpower of the Department of Defense.
- From prewar FY 1964 to FY 1973, GNP in constant (CY 1958) prices grows by some $238 billion; NIA defense purchases drop about $1 billion so that the entire real growth in the economy plus $1 billion is available for civilian pursuits.
- Over the same period, the labor force grows by some 14.7 million people. Defense needs drop by about 750,000. The entire growth in the labor force, plus the defense drop—15.5 million workers—is available for civilian pursuits.

These observations could be made, different in degree but not in direction, regarding comparisons of FY 1973 with any year in the past 20. These facts scarcely square with the picture of a domestic spending sector that is being starved for resources, money and manpower, to make room for a burgeoning defense budget. In spite of the facts, cold-war economic conceptions have proven to be persistent indeed. We have already noted the efforts to relate the inflationary pressures of recent years to the

Table 11

PUBLIC SPENDING AND MANPOWER

($ in billions, manpower in thousands)

	1939	1945	1950	1953	1956	1961	1964	1968	1971	1972	1973
Federal Budget:											
National defense	$1.1	$81.6	$13.1	$50.4	$40.3	$47.4	$53.6	$80.5	$77.7	$78.0	$78.3
Vets, space, debt int., international	1.5	7.9	19.4	13.5	13.4	17.9	23.8	30.0	35.9	38.3	39.9
Social and economic	6.3	8.4	12.3	14.9	18.2	34.9	44.1	72.9	105.3	128.1	136.6
Agency total	8.9	97.9	44.8	78.8	71.9	100.2	121.5	183.3	218.8	244.5	254.8
Offsets	−.1	−2.7	−1.7	−2.0	−1.4	−2.4	−2.9	−4.5	−7.4	−7.9	−8.6
Net Federal outlays	8.8	95.2	43.1	76.8	70.5	97.8	118.6	178.8	211.4	236.6	246.3
State and local spending	9.4	8.8	21.1	27.0	35.2	54.0	69.3	102.4	148.9	163.9	182.5
Grants-in-aid (deduct)	−.9	−.9	−2.2	−2.7	−3.7	−7.1	−10.1	−18.1	−29.8	−39.1	−43.5
Net public spending	17.3	103.1	62.0	101.1	102.0	144.7	177.8	263.1	330.5	361.4	385.3
Total social and economic spending[a]	14.8	16.3	31.2	39.4	49.7	81.8	103.3	157.1	224.4	252.9	275.6
Spending in CY 1958 prices:											
National Defense	2.7	152.7	16.7	58.5	43.3	45.0	49.0	65.0	50.5	46.9	43.7
Social and economic[b]	40.4	34.4	43.3	48.0	55.4	75.9	87.7	111.9	131.1	140.3	144.7
Public employment (000)	334	12,123	1,460	3,555	2,806	2,484	2,685	3,547	2,714	2,392	2,358
Military											
Detense civil service	196	2,628	729	1,340	1,185	1,048	1,035	1,287	1,094	1,041	1,036
Total Defense	530	14,751	2,189	4,895	3,991	3,532	3,720	4,834	3,808	3,433	3,394
Other Federal agencies	777	1,159	1,205	1,192	1,187	1,359	1,434	1,664	1,729	1,744	1,757
State and local	3,090	3,104	4,078	4,282	5,064	6,295	7,236	9,141	10,259	10,660	11,050
Total Non-Defense	3,867	4,263	5,283	5,474	6,251	7,654	8,670	10,805	11,988	12,404	12,807
Total Public Employment	4,397	19,014	7,472	10,369	10,242	11,186	12,390	15,639	15,796	15,837	16,201

[a] Federal social and economic plus all state and local, net of all grants-in-aid.
[b] Based on deflator for state and local purchases.

defense budget. The task is herculean, but the military fundamentalists have not flinched.

Data on many of the foregoing points are presented in Table 11. It is especially interesting to note the reversal of roles since 1945, the World War II peak. Note, for example, that total public employment (including military) was just over 19 million in 1945, the all-time high. Public employment is once again climbing toward this level, and will be about 16.2 million in 1973. There is, however, a radical shift in the composition of these two employment levels:

- In 1945, defense accounted for 77.6 percent of the total, and domestic programs for 22.4 percent.
- In 1973, domestic programs will account for 79 percent of the total, and defense for 21 percent.

No one would dispute the obvious fact that defense dominated the public manpower scene in 1945. What about 1973? Note that non-defense public employment will reach 12.8 million in 1973—more than were in the Armed Forces at the peak of World War II.

There is a similar reversal in spending. In constant (CY 1958) prices:

- National Defense spending in FY 1945 was $152.7 billion, while social and economic spending was $34.4 billion.
- Social and economic spending is estimated at $144.7 billion in FY 1973, with National Defense spending at $43.7 billion.

In 1945, a good agricultural fundamentalist would have brushed all this aside, and gone on interpreting the economy and the world in terms of what was happening to the farmer. In 1972, the military fundamentalists display a similar disregard for reality.

In formulating our national security programs, we have long-since known that the simplistic concepts of the early cold war 1950s are not relevant to the real world of the 1970s. We recognize, as the saying goes, that the world is indeed a good deal more complicated than it appeared to be in the early 1950s. And so is the budget. Economic thinking that is rooted in 1953 is no more helpful than strategic concepts of that vintage. Before we can do much effective planning, we must have a clear picture of where we really are today—and this involves a full acceptance of the fact that 1973 is not 1953. As we shall see in a moment, 1973 is certainly not 1945, and, it's not 1961 either.

Waging Peace

Dwight Eisenhower uttered his famous warning about the dangers of the military-industrial complex in his last address as President. Critics of defense programs have quoted this passage at length, and continue to do so, secure, apparently, in the belief that nothing has changed. In fact, there has been a very great deal of change and there is no better way to illustrate this than to consider President Eisenhower's statement in the context of what has happened, before and since.

President Eisenhower returned to the subject in his book *Waging Peace*.* He observed:

During the years of my Presi-

* Dwight D. Eisenhower, The White House Years: Waging Peace, 1956-61. Doubleday, 1965, pp. 614-616.

dency, and especially the latter years, I began to feel more and more uneasiness about the effect on the Nation of tremendous peacetime military expenditures. In the peacetime life-span of the United States, our practice had been to maintain a minimum defense establishment. For a time, we trusted to the protection of two vast oceans. We frequently indulged in a rather naive belief that any American could be made into a competent soldier within a matter of weeks or days. Every one of our wars was followed by rapid, drastic demobilization on the assumption that the world had become too civilized to fight again. With victory in World War II we began to reduce our forces so precipitously that every year from 1947 to 1950—on the eve of the Korean War—our annual military budget never exceeded $12 billion.

But in mid-1953, after the end of the Korean War, I determined that we would not again become so weak militarily as to encourage aggression. This decision demanded a military budget that would establish, by its very size, a peacetime precedent.

He also included "the most quoted section" of his speech, including these three paragraphs:

> A vital element in keeping the peace is our military establishment. Our arms must be mighty, ready for instant action, so that no potential aggressor may be tempted to risk his own destruction.
>
> Our military organization today bears little relation to that known by any of my predecessors in peacetime, or indeed by the fighting men of World War II or Korea.
>
> In the councils of government we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.

Earlier in his address,* in a passage not much quoted since, President Eisenhower had emphasized the threats to our security which make a large American defense effort necessary. He stated that:

> . . . the danger . . . promises to be of indefinite duration. To meet it successfully, there is called for, not so much the emotional and transitory sacrifices of crisis, but rather those which enable us to carry forward steadily, surely, and without complaint the burdens of a prolonged and complex struggle—with liberty the stake.

It is quite clear, then, that President Eisenhower regarded the 1947-50 peacetime defense programs as far too low, that he felt that much larger peacetime forces were necessary, and that he was concerned about the impact of this ongoing defense program upon American society.

Table 12 (above) shows what happened over this period, which gave rise to President Eisenhower's concern, and contrasts it with what has happened since.

President Eisenhower had, as he said, established a "peacetime precedent," a military budget far higher than we had known in peacetime. The FY 1950-61 changes indicate, insofar as data can do this, the matters that were troubling him. President Eisenhower assumed office in 1953, at the peak of the Korean War. While FY 1961 defense spending was below that level in real terms, it was far above the FY 1950 level—the last peacetime period before his presidency.

The FY 1961-73 changes indicate a dramatic change in allocations. Where defense took a very large share of the real growth from FY 1950 to FY 1961, it has taken virtually none measuring from FY 1961 to FY 1973. Defense manpower has fallen. The defense share of the GNP and the labor force has fallen back most of the way to the 1950 level. The defense share of the Federal budget is almost at the 1950 level, and the defense shares of total public spending and employment have fallen below that, to the lowest levels since before Pearl Harbor. In short, President Eisenhower feared that the military-industrial complex might continue to grow and exert increasing dominance over American life. This clearly has not happened.

There are other indicators. For example, defense purchased about 19.5 percent of U. S. durable goods production in FY 1961; the FY 1973 share will

TABLE 12. COMPARATIVE CHANGES IN BUDGETS

	Changes	
	FY 1950-61	FY 1961-73
Defense manpower (including industry)	+3,018	−481
Other public employment	+2,371	+5,153
All other changes	+4,113	+12,446
Total labor force (000)	+9,502	+17,118
Defense purchases	$+27.9	$ +1.4
Other Government purchases (FSL)	+16.0	+49.7
Other GNP increases	+108.3	+267.3
Total GNP (CY 1958 $ billions)	+152.2	+318.4
National Defense outlays	$+34.3	+30.9
Federal social and economic outlays	+22.6	+101.7
Other Federal outlays	−1.5	+22.0
State and local spending	+32.9	+128.5
Offsets	−5.6	+42.5
Net public spending (current $ billions)	+82.7	+240.6
	1950	1961	1973
Percentage relationships—National			
Defense outlays as percent of:			
GNP	5.0%	9.4%	6.5%
Federal budget	29.2%	47.3%	30.7%
Net public spending (Fed., State & Local)	20.6%	32.2%	19.9%
DoD/MAP as % of:			
Public employment (Fed., State & Local)	29.3%	31.6%	20.9%
Labor force	4.2%	7.8%	5.8%

* Public Papers of the Presidents: Dwight D. Eisenhower, 1960-61, p. 1037.

be well under 10 percent. Defense accounted for 49.2 percent of U. S. R&D spending (public and private) in 1961 versus 29 percent in 1972. Of the total Federal money spent in colleges and universities, defense accounted for 16 percent in 1961, compared to less than 3 percent in 1973. The percentage of young men (19-22 years of age) in the Armed Forces had risen from 12.1 percent in 1950 to 16.5 percent in 1961. It will be less than 12 percent in 1973—the lowest percentage since before Pearl Harbor. Defense expenditures entering the balance of payments in FY 1961 were equivalent to 22.4 percent of merchandise imports; in 1972 the figure is under 10 percent.

Comparing FY 1973 with FY 1961, we find that none of our real economic growth has gone to defense. Consider, for example, the implications of the fact that there are 17.6 million more workers available for non-defense pursuits than there were when President Eisenhower spoke—the entire labor force growth, and a bit more. In relative terms, the impact of defense has decreased dramatically. In repeatedly quoting President Eisenhower's warning, the military fundamentalists imply that nothing had changed since 1961. This is simply false.

It is significant to compare the National Defense budgets of President Eisenhower and President Nixon. When President Eisenhower delivered his farewell address on January 17, 1961, he had just completed work on his FY 1962 budget, including revisions to the FY 1961 estimates (FY 1961 ended June 30, 1961). His FY 1962 estimates were to be amended by the incoming Kennedy Administration, but the FY 1961 figures are President Eisenhower's. In *Waging Peace*, he mentioned (regarding his fears of the military-industrial complex) that "in the making of every military budget, my associates and I were guided by these considerations." *

* Waging Peace, op. cit., p. 615.

TABLE 13. KEY DATA FROM TWO BUDGETS

	Eisenhower FY 1961	Nixon FY 1973
Total National Defense outlays ($ billions)		
Current prices	$47.4	$78.3
Constant (FY 1973) prices*	81.1	78.3
Manpower (thousands)		
Active military	2,484	2,358
Defense civil service	1,048	1,036
Subtotal	3,532	3,394
Defense-related employment in industry	2,200	1,857
Total Defense-related manpower	5,732	5,251

* Both constant-price figures include the cost of military retired pay in FY 1973 ($4.9 billion). With few exceptions, the members of the FY 1973 military retired population were either (a) already retired in FY 1961 or (b) on active service in 1961. The FY 1973 retired pay costs would therefore be very nearly the same under any set of assumptions involving 1961-73 comparisons.

Key data from the two budgets are compared in Table 13 (above).

President Nixon's proposed FY 1973 National Defense budget is lower—in dollars of constant buying power and by nearly half a million personnel—than President Eisenhower's last budget.

By any measure, then, the military-industrial complex has not grown since 1961. In absolute terms—manpower and real buying power—defense programs are somewhat below the Eisenhower levels. In relative terms, there have been very sharp reductions. President Eisenhower can scarcely be used as a witness against present defense programs.

ECONOMICS OF DEFENSE SPENDING

Conclusions

Critics never tire of pointing out that, in the 27 years since the close of World War II, we have spent over a trillion dollars on defense. The figure is correct, but not the inference that is usually drawn: that we've received little or nothing of value from that expenditure. This is a strange reading of history. With all our problems, the world is a much better place than it was in the 1930s or 1940s. With all its faults, the American defense effort has made major contributions to this betterment.

While we can learn from the past, we can't relive it, and we shouldn't devote all our time to debating it. We did spend more than a trillion dollars on defense in the past 27 years. Of much more importance today is the fact that we'll spend over a trillion dollars on social and economic programs in the next three years, and whatever we do about defense over that span isn't going to have much of an impact upon that trillion, either way. The trillion that went for defense over the past quarter century is gone. We can't re-use that money to build a different America. But a new trillion will be available for social and economic programs over the next three years, and we can do a great deal with it if the money is well managed and well allocated. As a first requirement, though, many will have to cease pretending that the money isn't really there.

The defense budget will be large for the foreseeable future. Some persons have recommended a $55 billion budget for FY 1975, in itself a huge amount of money. Moreover, eliminating the pricing errors in those recommendations and being more realistic regarding implementation time, it is unlikely that defense spending would drop below $70 billion, even if those recommendations were or-

dered into effect in the near future. And, of course, if they do not go into effect, the defense budget will almost certainly be a good deal larger than $70 billion.

The defense budget will be large under any foreseeable circumstance because we have vital national interests that can be secured in no other way. We will maintain a large military establishment, at great cost, because we are not prepared to tolerate the world as it would be without one. There is, of course, room for debate as to just how large the defense program should be, considering resources and other needs in priority order. All programs, including defense, should be weighed in the scales—at full costs, and at full value. We ask only that the scales be calibrated the same for all programs.

The last is a matter of the greatest importance. If the matter is approached as it is in much of today's literature, we are likely to pay a heavy price in terms of national security and of domestic programs as well. For the years ahead, we must have the orders-of-magnitude clearly in mind. As a benchmark, a 20 percent cut in defense programs would mean either:

- A three percent increase in other public spending, or
- A three percent decrease in taxes, which will be equivalent to an increase of 1½ percent in take-home pay.

The arithmetic would be the same in reverse, for a 20 percent increase in defense spending.

If this perspective is maintained, then changes in defense and other programs can be made with a reasonable awareness of the opportunity costs involved. If, on the other hand, we define away the bulk of non-defense spending—pretending that it doesn't really exist—and place full defense costs in competition with the remaining fraction of domestic spending, the consequences could be serious indeed. This, in effect, is the resource-allocation model that is put forward in much of the present literature. Over $200 billion annually in social and economic spending is either simply ignored or defined away, in addition to tax aids and extra-budgetary credit. Defense costs are then overstated, and it is suggested that we allocate resources by competing defense needs with the fraction of social and economic programs that have not been defined out of the picture. Under such an approach, of course, the opportunity cost of defense programs appears high indeed. The huge amounts of spending that are left out of consideration would continue to be beyond the bounds of our resource-allocation mechanisms, and they would probably continue to grow rapidly, as they have in the past. This increasing spending would have to be supported by the only set of taxpayers we have. Meanwhile, other social and economic programs would be dependent upon the shrinking "controllable" margin—largely gouged from defense programs at the expense of national security. The consideration of all resources and all needs in priority order, then, is essential to national security and to effective social and economic programs as well.

The resources available for social and economic programs are indeed immense: $275.6 billion in FY 1973 spending (Federal, state and local) growing, based on projection of the most recent trends, toward the $420-$480 billion range by FY 1978, plus extra-budgetary credit (estimated at $225 billion in outstanding loans in FY 1973) and Federal tax aids (about $50 billion in FY 1973). If these resources are well managed and well allocated, a great deal can be accomplished. If not, then extra amounts derived from further defense cutbacks aren't likely to be of much help.

In the issues regarding the defense budget for the next several years, we are not facing the choice between continuing with a "war economy" or converting to a "peace economy." We don't have a "war economy" today, and nobody is suggesting defense programs that would put the economy on a war footing. Defense in 1972 takes about four percent of the output of goods and services of the private sector of the American economy. In the years ahead, unless there is a major adverse change in the international situation, that will fall toward three percent. The debate over the defense budget will involve whether defense should take somewhat more than three percent of the private sector output by the middle and late 1970s, or somewhat less than three percent. While the absolute amounts involved are critical in national security terms, such a range scarcely delineates the difference between a "war economy" and a "peace economy."

Conversion is much farther along than many realize. From 1968 to 1972, defense manpower has been cut by about 2.8 million, and some 7.2 million non-defense jobs have been created. Over the decade from 1968 to 1978 there will have to be about 19 million non-defense jobs created, with a drop of some 3 million defense jobs if the defense budget continues in the present range. Under the lowest defense budget that is likely to be proposed, somewhat over a million additional non-defense jobs would be required, and the defense cutback (measured from 1968) would exceed 4 million. The range of debate, then, involves whether there will be about 19 million or 20 million additional non-defense jobs created in the 1968-78 decade. We are near the mid-point of that decade with the largest part of the defense cutback behind us, whatever budget level is chosen for the mid-1970s, and the economy is showing signs of the strength it will need to create 19 million non-defense jobs in a decade. It is torturing the English language to suggest that we will have a "war economy" if we create 19 million non-defense jobs, 1968-78, but will have converted to a "peace economy" if we create 20 million. While that margin of manpower scarcely marks the difference between a "war economy" and a "peace economy," it is of immense significance to our national security effort in absolute terms.

It is conceivable that a consideration of all resources and all needs in priority order may indicate that defense spending and manpower levels should be changed (up or down) from the levels presently planned. These matters are complicated enough if approached on their merits. Nothing is gained by injecting confusing rhetoric which postulates a "war economy" on the one hand and a "peace economy" on the other, or a bloated war machine versus a starved domestic sector. The arithmetic of the real world simply can't support such a rhetorical load. We are discussing:

- A defense program that takes somewhat more than three percent of the private sector output in the middle and late 1970s, versus one that would take somewhat less than three percent.
- 19 million new non-defense jobs, 1968-78, versus 20 million.
- About 5 million people engaged in defense work (military, civil service and industry) and 94 million workers available for non-defense work in 1978, versus about 4 million and 95 million, respectively.

In terms of national security, the dif-

ference between 4 million and 5 million people is immense. The fundamental nature of the American economy, however, is not at issue. Massive additional amounts have been, are being, and will be allocated to the domestic sector.

We must also dispense with the notion that there are easy billions to be derived from defense programs by cutting out "cost overruns," curtailing profits and excessive costs, and generally tightening up management. The profits on defense work simply aren't excessive, and if one wants to use the term "billion" in connection with after-tax profits on defense work, he must forego the plural. "Cost overruns," as we have seen, have been grossly misrepresented. Indeed, few if any public spending programs—legislative, executive, or judicial; Federal, state and local—could pass the test contrived by the critics for defense systems. Try it, using your favorite domestic program as a model. Find a long-run cost forecast made five years or ten years ago (if you can't find one, you've failed the test already). Add up the costs shown, say, for the period 1970 to 1980. Compare it with the current estimates for that period. The difference is the billions you could "save" by tighter management. Excessive costs? With unerring instinct for the irrelevant, the critics have zeroed in on major weapon systems. There are few, if any, major areas of public spending—Federal, state, or local—that show as little growth from the late 1950s to the spending levels of today.

This is not to say that there cannot be improvements in defense management. There can be, and there must be. But it is wildly inaccurate to allege that billions or tens of billions could be saved through management improvements. Defense management is simply not that bad, and the critics have relatively little to offer in the way of constructive suggestions. Experience suggests, at the least, that we not plan on those easy billions before they materialize.

No Easy Answers

Those who suggest that we can solve our public spending problems by peeling some easy billions off the defense budget are arguing not only with the Pentagon but with reality, and reality is a formidable opponent. There are no such easy billions and there are no easy answers. Large cuts in the defense budget can only come through cutting weapons and forces, and no such cuts are likely to make the crucial difference in the quality of American life, considering the relative magnitudes of public spending. Those who persist in seeking the answer to our public spending problems in the defense budget are like the man who was crawling about on his hands and knees one night on the sidewalk under a streetlight. A policeman stopped to inquire, and the man explained that he had lost his keys, and was looking for them. The policeman joined the search, but observed after a time that the keys were certainly not there. "Are you sure you lost them here?" "No," said the man, "I didn't lose them here. I lost them over there in the bushes. But I'd rather look here, because the light is better."

The search for the keys inevitably leads back to the total public spending and taxing picture, and our ability to allocate effectively within the total. The FY 1973 budget of $385 billion total indeed represents a great many tangles and complications, more forbidding than the bushes in the story.

Beyond Budgetary Procedures

In moving toward more effective resource allocation, it will be necessary to find some means to go beyond the budgetary procedures and the related Congressional authorization/appropriation processes as now constituted. These processes are now limited in time to one year, and are also limited in scope. Means will have to be found to consider systematically more nearly the totality of the public spending picture over a span of several years.

More important than statistics or mechanics is the spirit within which we approach these matters. We have described a cold-war mentality in much of what is written today concerning defense programs—a doctrine of inevitable and enduring conflict between defense programs and nobler social purposes, a view that nothing can really be right until the power of militarism is broken. As we have observed, we are not facing the choice between a "war economy" and a "peace economy," nor is there any issue regarding the allocation of massive amounts of additional resources to domestic programs. More than that, there is no long-run conflict between National Security and domestic programs. In the long view, true National Security does not derive exclusively, or even primarily, from those activities covered under the heading of National Defense. National Security derives, rather, from the strength and well being of American society as a whole. This involves, of course, the economy, as well as activities under such headings as education, health, income security, housing, transportation and agriculture, to name only a few. An overallocation to weapons at the expense of these can be harmful to true National Security in the long run.

A Trillion Dollars

By the same token, we cannot draw a circle around National Defense and maintain that nothing inside the circle contributes to the quality of American life. We mentioned earlier that America has spent over a trillion dollars on defense in the past quarter century. What we have bought with that money cannot be measured in exclusively military terms. Consider, for example, the conditions in Europe in the late 1940s. With their economies badly damaged by the war, and facing strong military and political pressure, the nations of Western Europe could not rebuild until they were assured that there would be a tomorrow. That assurance came through the Marshall Plan and the American commitment to the continent through NATO. The result was the European economic miracle (which is what we called it before it became a balance-of-payments headache) and far more than that. Surely this has meant something to life in America that transcends the traditional definitions of military security. The same would apply to the Japanese postwar recovery. Our military involvement in these developments was certainly a key ingredient. Looking back on all this, how much was it worth? Did we, after all, make a bad investment? And, of what we gained, how much would we classify under the military heading and how much under other headings? We believe that a fair reading of the developments of the past two decades would indicate that we derived immense returns from our military spending—returns that cannot be restricted to the military heading alone.

We will close with a thought attributed to Marshal of the RAF Sir John Slessor:

> "It is customary in democratic countries to deplore expenditure on armament as conflicting with the requirements of the social services. There is a tendency to forget that the most important social service that a government can do for its people is to keep them alive and free."

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